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ABSTRACT

What does educational research tell us about the effects of school desegregation? A review of past and present research studies provides no conclusive evidence about the effects of school desegregation, primarily because of the variance in type of methodology, time period of desegregation implementation, and type of desegregation plans evaluated. Major shortcomings of this research include: (1) the absence of a strong theoretical framework that acknowledges cultural differences and conflicts between minority and majority group cultures; (2) inconsistencies among research findings; (3) the lack of communication between researchers and educational practitioners and policy makers; and (4) the limited inclusion of racial minorities other than blacks. Recent studies based on ethnographic field techniques and secondary longitudinal data improve upon past studies by better specifying the internal characteristics of desegregation, and by examining the relationship between school desegregation and other outcome variables such as student aspirations, self concept, and racial attitudes. The topics which still need to be addressed include: (1) effects of desegregation on whites; (2) effects of enrollment decline and funding policies; (3) the nature of school counseling, tracking practices, and academic success in segregated and desegregated schools; (4) effects of desegregation on minority faculty and staff; and (5) effects of desegregation on traditionally black colleges. (JCD)

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What Does Educational Research Tell Us About School Desegregation Effects?*

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Introductory Statement

The Center for Social Organization of Schools has two primary objectives: to develop a scientific knowledge of how schools affect their students, and to use this knowledge to develop better school practices and organization.

The Center works through five programs to achieve its objectives. The Studies in School Desegregation program applies the basic theories of social organization of schools to study the internal conditions of desegregated schools, the feasibility of alternative desegregation policies, and the interrelations of school desegregation with other equity issues such as housing and job desegregation. The School Organization program is currently concerned with authority-control structures, task structures, reward systems, and peer group processes in schools. It has produced a large-scale study of the effects of open schools, has developed Student Team Learning Instructional processes for teaching various subjects in elementary and secondary schools, and has produced a computerized system for school-wide attendance monitoring. The School Process and Career Development program is studying transitions from high school to post secondary institutions and the role of schooling in the development of career plans and the actualization of labor market outcomes. The Studies in Delinquency and School Environments program is examining the interaction of school environments, school experiences, and individual characteristics in relation to in-school and later-life delinquency.

The Center also supports a Fellowships in Education Research program that provides opportunities for talented young researchers to conduct and publish significant research, and to encourage the participation of women and minorities in research on education.

This report, prepared by the Studies in School Desegregation program, examines previous research on school desegregation effects and suggests new research directions to provide useful information for policy deliberations about desegregation.

Abstract

This paper asks the question: What does educational research tell us about the effects of school desegregation? The evidence suggests that we know little about school desegregation effects, and to adequately assess these effects will require at least another decade of well designed longitudinal research which responds to questions and issues that are not being currently addressed. Our conclusions are based primarily on a review and evaluation of the methodologies and findings from past and present school desegregation research. We also present a set of alternative research questions and issues that should guide future school desegregation inquiries.

Introduction

James Coleman's (Coleman et al., 1966) Equality of Educational Opportunity (EEO) study (referred to elsewhere as the Coleman Report) has been the single most influential document on school desegregation policy and research. The finding that had the greatest impact was that black student academic achievement increased as the proportion of white students in their schools increased. Various methodological criticisms of the Coleman Report generated a series of reanalyses of the EEO data (U.S. Commission on Civil Rights, 1967; Armor, 1972; McPartland, 1968; Pettigrew and Riley, 1972). However, the positive relationship between black achievement and percent white student enrollment was also confirmed in these reanalyses. Armor (1972) and others who reassessed the EEO data amended the initial finding by Coleman and his colleagues by noting that the positive effect of percent white on black achievement was due to desegregation at the classroom level as opposed to the school level.

Many of the school desegregation studies following the Coleman Report and reanalyses of the EEO data employed longitudinal quasi-experimental designs. Researchers using this approach pointed out that the EEO data were cross-sectional and thus not appropriate for assessing black achievement before and after desegregation. St. John (1975), Bradley and Bradley (1977) and others (Weinberg, 1977; Crain and Mahard, 1981) have reviewed school desegregation studies that have used a longitudinal-experimental design. These studies represent some improvement over the EEO investigations; however, they also share important methodological limitations.

One criticism of these studies is poor application of the experimental design techniques. St. John (1975) reported that at least three assumptions

must be met in order for longitudinal experimental design studies of school desegregation to be valid tests of desegregation effects. First, desegregated and segregated subjects must be initially equivalent regarding demographic and background characteristics (i.e., socioeconomic status, age, aptitude). Subjects should therefore be randomly assigned and matched on these variables. Second, desegregated and segregated schools must retain a majority of the original subjects throughout the course of the study. Third, curricula and programs in the segregated and desegregated schools should be equivalent in all respects except for racial composition. St. John (1975) also noted that quasi-experimental school desegregation studies should include subjects who are transferred from segregated to desegregated schools and a control group of students who attended a segregated school prior to and after desegregation.

Bradley and Bradley (1977) used St. John's criteria to evaluate a number of recent desegregation studies. Table 1 lists and summarizes these studies. The authors concluded that although many of the studies

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Table 1 About Here
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indicated positive desegregation effects, their methodological deficiencies restricted the validity of most of the findings. For example, most of these investigations lacked adequate control groups. In addition, they varied extensively on how the schools achieved desegregation (i.e., busing, school closing, open enrollment).

A more recent review of 93 studies by Crain and Mahard (1981) highlighted additional factors that render many school desegregation findings tenuous. Different measures of achievement were used to assess the effects

of desegregation on black students. Some studies used percentile rankings while others used raw scores and grade level equivalence. Studies also differed on the time in which desegregation was implemented and evaluated, and the grade level in which students were desegregated. In 50 percent of the investigations, desegregation effects were evaluated at the end of the first year of implementation. Only 3 percent of the studies reviewed by Crain and Mahard (1981) evaluated desegregation effects on black achievement after five years of implementation.

Table 2 shows the seven types of methodologies that were used in the studies reviewed by Crain and Mahard (1981) and the frequency of positive

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Table 2 About Here

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desegregation effects associated with each method. Eighty-six percent of the studies that used the longitudinal random design, which is the most reliable technique, indicated positive desegregation effects. Conversely, among the studies that employed the most unreliable design (i.e., the national norms technique, which asks whether black test scores are approaching white test scores over time), only 33 percent indicated positive desegregation effects. Thus, variations in the quality and reliability of research designs is another factor that has restricted the conclusiveness of school desegregation studies employing the quasi-experimental method.

Recent Survey and Ethnographic Studies of School Desegregation

More recent studies of school desegregation, based on ethnographic field techniques and secondary longitudinal data, have not been systematically reviewed. They depart from and improve upon past studies by better detailing

the internal conditions that characterize desegregated schools, examining the relationship between school desegregation and other outcome variables (i.e., student aspirations, self-concept, racial attitudes), and extending school desegregation research to include college and higher education effects. In addition, a few studies have examined the long-term effects of school desegregation and its relationship to other institutions (i.e., housing, employment) and social processes (i.e., white flight).

Classroom and School Climate Studies

Recent desegregation research on school and classroom climate has focused on the relationship between the social dynamics of the classroom and school environment and student achievement and race relations. For example, Slavin and Madden's study (1979) showed that classroom activities that involve cooperative interaction between students of different races improve race relations. Brookover (1978), Schofield and Sagar (1979) and Rist (1979) also investigated the internal conditions of classroom and school environments. Rist (1979) summarizing a number of ethnographic studies, reported that the patterns of racial adaptation and conflict among students, teachers and staff differed considerably among desegregated schools depending upon the sex, age and socioeconomic status of students. He concluded that successful school desegregation depended on the social and demographic mix of students, and on how school administrators defined success (for example, some administrators considered desegregation successful if the level of violence and interracial conflict in schools was kept at a minimum).

School Desegregation Effects and Other Independent Variables

Earlier school desegregation studies focused almost exclusively on

academic achievement as the major dependent variable. However, more recent studies have considered other outcome variables. For example, Epps (1978) and Hare (1979) investigated the effects of school desegregation on black students' aspirations, self-concept and self-esteem. Epps reported that black students in desegregated schools do not experience low self-esteem or low aspirations. Hare (1979) investigated sex differences in achievement orientations and self-esteem among blacks in desegregated schools. He found that black females scored higher on both measures than black males. Epps (1978) and Hare (1979) noted the importance of social class and the context of the school learning environment in understanding race and sex differences in self-esteem, self-concept and aspirations.

Farley (1975) and others (Giles, Gatlin and Cataldo, 1974; Coleman, Kelly and Moore, 1975; Rossell, 1975) have examined the relationship between school desegregation and white flight. Farley, Richards and Wurdock's (1980) review of the "white flight" literature indicated that the findings are equivocal. One reason is that some of the studies on white flight are based on case studies of cities that had desegregated for different lengths of time while other studies examined cities in the initial stages of desegregation. Most of these studies showed a decline in white student enrollment in the public schools within the past decade. However, Farley et al. (1980) noted that better statistical models and greater consistencies among models and methodologies are needed to determine the actual impact of school desegregation on white flight.

Higher Education Desegregation

Desegregation in higher education became a central issue in 1970 after the Adams decision (Haynes, 1978) which mandated that states desegregate

their colleges and universities. Consequently, the number of studies that address the effects of higher education desegregation are limited. Thomas, McPartland and Gottfredson (1980) examined the relationship between higher education desegregation and black student enrollment throughout higher education. They found that racial isolation between blacks and whites was greatest at the two- and four-year levels, where blacks had the greatest enrollment access, and lowest at the graduate and professional levels, where blacks were least represented. Their findings also demonstrated that desegregation could negatively affect black student enrollment in the South if racial isolation were reduced by eliminating the traditionally black colleges and universities.

Other studies at the postsecondary level have assessed the relationship between desegregation and black student persistence (Thomas, 1981) and the experiences of black students at predominantly white colleges (Willie and McCord, 1972; Boyd, 1981; Allen, 1981). Willie and McCord (1972) and Allen (1981) found that many black students on white campuses experience alienation, dissatisfaction, and academic difficulty. Thomas's (1981) investigation showed that net of family background and academic ability, black students in predominantly black colleges graduated on schedule more often than blacks in predominantly white colleges. Also, Johnson, Smith and Tarnoff (1975) found that black graduate and professional students in predominantly white institutions experienced problems of prompt promotion and retention.

Long-Term Effects of School Desegregation

Few studies have evaluated the effects of school desegregation on occupational attainment and other adult outcomes. Crain (1970) investigated

the effects of secondary school desegregation on the job attainment of black males. He reported that black men who had attended desegregated secondary schools obtained better jobs than blacks who had attended predominantly black schools. Black men from desegregated schools held a higher percentage of nontraditional jobs in sales, crafts, and the professions, and had higher incomes than black male graduates from predominantly black high schools.

A study of the long-term effects of desegregation by the U.S. Commission on Civil Rights (1967) reported that blacks who had attended desegregated schools were more likely to live in desegregated neighborhoods and enroll their children in desegregated schools, and had more access to job information than blacks who had attended predominantly black high schools. Crain and McPartland (1980) reported from a more recent longitudinal survey that black students in predominantly white colleges perceived greater job opportunity and chances for success than black students at predominantly black colleges. More recent and extensive longitudinal data are needed to assess the long-term effects of school desegregation.

General Assessment of School Desegregation Research

Although the more recent desegregation studies have extended earlier work, they share important limitations with past studies. For example, school desegregation studies generally lack clarity and/or consistency regarding the goals and objectives of school desegregation. An implied assumption underlying this research is that the goals and objectives of school desegregation are multifaceted. Thus school desegregation is designed to: (1) achieve a certain student and faculty racial mix: (2) improve minority achievement; (3) improve race relations; (4) promote the

access and retention of minorities at the college and advanced higher education levels; and (5) increase the quality and diversity of job opportunities for minorities. All of these are important goals. However, if schools are to be more effective and more consistently evaluated, these goals must be ranked by policymakers.

School desegregation studies also lack an appropriate theoretical framework. Initially, Coleman (1966) and his colleagues employed McClelland's (1951) theory of "need achievement" and the "lateral transmission of values" hypothesis to explain the positive relationship between black achievement and percent white enrollment. They argued that black students lacked the necessary achievement values and motivation, but that contact with white students (who were appropriate role models) would enhance black student achievement and motivation. This explanation has not been challenged in subsequent desegregation studies (Bradley and Bradley, 1977). However, William Labov (1970), Ogbu (1978), and Valentine (1971) have argued that traditional achievement theory and "deficit" perspectives are highly ethnocentric and inappropriate for understanding minority achievement. These critics suggest that Bicultural, Difference, and Conflict theories provide more appropriate frameworks because these theories acknowledge cultural differences and cleavages between majority and minority group cultures.

Pettigrew (1967) and McConahay (1978) maintain that Gordon Allport's (1954) Equal Status Contact theory is a useful theoretical perspective for implementing and assessing school desegregation. Allport's theory specifies seven conditions that must occur to facilitate equal status and positive race relations between members of majority and minority groups:

1. Equal status must exist within the contact situation.
2. Positive perceptions of the other group (regardless of status) must result from activities during contact.
3. Majority group members must experience contact with minority group members who are of higher socioeconomic status.
4. Contact must occur under conditions that require cooperation between racial groups.
5. Meaningful rather than superficial contact must occur.
6. The authorities in desegregated settings (i.e. school officials, employers, etc.) should favor and promote the intergroup contact situation.
7. Contact should occur in a positive environment that offers rewards.

Pettigrew (1967) reported that many of the school climates in which desegregation has taken place do not meet Allport's (1954) criteria. McConahay (1978) noted that much money, effort and good will are required to successfully implement these conditions in desegregated schools. However, if effectively implemented, these conditions may result in more positive race relations and minority achievement.

A third weakness of desegregation research is the void between the findings and their usefulness to school practitioners and educational policy makers. Smith and Dziuban (1977) described the situation as follows:

> "The numerical indicators and correlates of desegregation derived from national level studies have had minimal effect on assisting schools through the stages from segregation to desegregation to integration...By now, it should be obvious that desegregation will not be accomplished in a computer." At present researchers only talk to researchers,

> and those who are involved with remedies can not listen. The result is a debilitating gap between research and remedy (1977; p. 51).

Thus, in addition to inconsistencies among research findings, there is the problem of communicating the findings to the broader educational community. This is particularly true of school desegregation studies that have used multivariate analyses and employed dummy variable measures of school and student racial composition as independent variables. Very little can be inferred from these studies as to why these racial composition measures produce various effects. Smith and Dziuban (1977) noted that many of the variables that may help explain the relationship between segregation/desegregation and student outcomes do not lend themselves to multivariate analyses.

A final, important shortcoming of school desegegation research is its limited inclusion of other racial minorities (i.e., Hispanics, Asian-Americans, Native Americans). School desegregation and equality of educational opportunity have been basically defined by policy makers and researchers as "black-white" issues with studies primarily based on black and/or white samples. Also, few studies have been conducted by minority researchers.

In summary, desegregation research should be expanded to include studies of other racial minorities. In addition, more minority and majority researchers with alternative theoretical perspectives should be engaged in school desegregation research.

Alternative Questions for Future Research

In addition to responding to the research limitations previously discussed, future school desegregation researchers must investigate the

following important questions that have not been raised or adequately addressed in past studies.

1. What is the effect of school desegregation on whites?

   We know little about the attitudes and perceptions of whites toward desegregation and the effects of school desegregation on white student achievement. The few past investigations on whites show that white parents are opposed to busing and that white students do not experience achievement decline as a result of desegregation (Weinberg, 1975; Armor, 1972). Also, Webster (1961) and Sheehan (1980) found that desegregation reduces the stereotypes and negative attitudes that whites hold towards blacks. More systematic data on the effects of desegregation on white students, teachers, parents and administrators at all levels of education are needed.

2. What are the current and future effects of student enrollment decline and state and federal funding policies on school desegregation?

   Central city school districts with high concentrations of minority students are experiencing disproportionate declines in student enrollment. The U.S. Commission on Civil Rights (Education Daily, 1977) reported that 41 percent of all black elementary and secondary school children attend predominantly inner city schools that are 90 to 100 percent black. These schools have undergone substantial student loss. Because most states allocate funds on the basis of the number of students in a school district, many of these schools have experienced a decrease in state aid.

Smith and Dziuban (1977) reported that most current state aid formulae and supplemental federal funding (i.e., Title I) do not offset the differential needs of poorer districts. They also noted that fiscal discrimination often accelerates school and residential desegregation along class and racial lines. Schools that receive certain types of state and Federal funds are frequently labeled as "schools for the disadvantaged." These schools are readily perceived as inadequate by middle class parents who subsequently relocate and/or enroll their children in private schools or more attractive public schools. The increase in private school attendance by middle class students, the declining enrollments in inner city schools, and the decrease in Federal and state support for public educational programs are factors that seriously threaten the future of public school desegregation. Thus, their effects should be extensively assessed in future studies.

3. What is the nature of school counseling and tracking practices and student academic success in segregated and desegregated schools?

Research evaluating the effectiveness of segregated versus desegregated schooling should more systematically examine the structure and internal conditions of desegregated and segregated learning environments. Comparative studies at the elementary and secondary levels are needed to assess the nature of student counseling and school tracking practices. Existing data show that net of ability, minority students in desegregated elementary and secondary schools are more frequently assigned to special education and vocational programs than majority students (Smith

and Dziuban, 1977; Rosenbaum, 1976). In addition, Crain and Mahard (1978) reported that the lower the proportion of black teachers in secondary schools, the lower the grades of black students and the lower their college attendance rates.

Knowledge of how minority students fare regarding prompt promotion and retention at all levels of schooling is also critical for assessing the effectiveness of school desegregation. Felice and Richardson (1977) examined the attrition rates of blacks and Mexican-American students three years before and after the desegregation of a Waco, Texas school district. They found that the attrition rates were higher for both groups after desegregation. In addition, the authors reported that dropout rates were higher for minority students who were bused to lower socioeconomic status schools where teacher expectations were lower than for minority students who attended high socioeconomic status (SES) schools where teacher expectations were higher. Felice and Richardson (1977) concluded that the SES climate of the school and teacher expectations are important determinants of the retention and academic success of minorities in desegregated schools.

A few studies have been conducted on the retention and academic achievement of blacks at the postsecondary and graduate school levels. Thomas (1981) found that net of family status and ability, black students attending predominantly black colleges receive higher grades and are more successful in graduating on schedule than black students in predominantly white colleges. A

more recent study of black undergraduates by Fleming (1981) also showed positive effects for black colleges. She reported that matriculation in black colleges enhanced the ability of black students to compete socially and academically, but matriculation in white colleges produced a decline in the competitive performance of black students. She concluded that black colleges, rather than duplicating the services of white colleges, offer their students an alternative educational and social environment that supports and promotes their academic achievement. Johnson, Smith and Tarnoff (1975) studied the retention and promotion patterns of black graduate and professional students in predominantly white institutions. They observed that a disproportionate percentage of these students experience course repetition and attrition.

4. How does school desegregation affect minority faculty and staff?

Desegregation research has focused almost exclusively on students as the prime unit of analysis. However, alternative units (i.e., institutions, special interest groups, school boards) and other participants in the desegregation process need to be studied. We know little, for example, about the effects of school desegregation on minority faculty. One study at the elementary and secondary level revealed that black principals were often reassigned to less competitive positions following desegregation and that a disporportionate number of less experienced black teachers were assigned to poor and predominantly black urban schools (Smith and Dziuban, 1977).

A more recent study of minority faculty in predominantly white colleges has been conducted by the National Urban League (Stafford, 1980). Sixty-one percent of the minority faculty (Hispanics, Blacks, Asian-Americans) in the study indicated that they were dissatisfied with their opportunities for advancement. Forty-six percent felt that they were in less secure positions than their white colleagues, and 40 percent reported that they were likely to leave their current institution within the next five years.

5. How does desegregation affect traditionally black colleges?

Many of the traditionally black colleges and other minority institutions are experiencing a substantial loss in student enrollment due to declining Federal and state aid and increasing black student enrollment in white colleges. However, despite these adverse trends, black colleges continue to award approximately 50 percent of the BA degrees earned by black undergraduates (Morris, 1979). The status and role of black colleges and other minority institutions need to be assessed in future school desegregation research.

Summary and Conclussion

This paper undertook a comprehensive review of past and present school desegregation literature to assess how well we are currently informed about school desegregation effects. Many of the studies reviewed showed positive desegregation effects while an equal number showed negative or negligible effects. In addition, studies varied in the type and strength of their methodology, in the time period of desegregation implementation, and in the type of desegregation plans evaluated. Given these and other

disparities, we concluded that no definitive statement can be made presently about the effects of school desegregation.

We suggest that several improvements and extensions in present desegregation research methodology and theory are needed to extend our knowledge and understanding of school desegregation effects, and raise a number of alternative questions, issues, and units of analyses that must be considered in future work. We conclude that at least another decade of systematic inquiry by majority and minority researchers who have access to richer data and who employ better theoretical perspectives will be needed to advance our current understanding of school desegregation effects.

Table 1

A Capsule Review of Field Desegregation Studies, 1959 - 1975

Author	*Category*	*Design*	*Statistical Analysis*	*Results*	*Weaknesses*
Anderson, Note 3	Open Enrollment	*Ex post facto*, quasi-experimental	*T* tests, correlations	Desegregated black subjects achieve at significantly higher level than segregated subjects.	Did not take into account parents' socioeconomic status and attitudes.
Armor, 1972a	Busing	Nonequivalent control group	*T* tests	No significant differences in achievement gains between black and white subjects.	Bused subjects were volunteers; bused and control subjects were not matched; high rate of subject attrition; sending and receiving schools were not equivalent; no adequate predesegregation measures of achievement.
Banks & DiPasquale, Note 13	Busing	Nonequivalent control group		Bused subjects made higher mean achievement gains than black control subjects; achievement level gap between white control subjects and bused subjects about the same.	Subject selection not specified; large predesegregation achievement difference between bused and black control 7th-grade subjects.
Beers & Reardon, 1974	Central Schools	Unspecified, quasi-experiment	None	Black subjects' gain scores, relative to those of whites, were enhanced.	No adequate predesegregation measures of achievement; no true control group; school system personnel and policy changed during course of study.
Carrigan, Note 4	School Closing	Nonequivalent control group	*T* tests	Black control subjects generally performed at higher levels than black transferred subjects.	School from which control subjects were drawn was actually desegregated.
Dambacher, Note 15	Busing	Cross-sectional and longitudinal	None	Black, third-grade subjects made greater achievement gains after desegregation than prior to desegregation.	No control group; inadequate design.
Denmark, 1970	School Closing	Unspecified, quasi-experiment	None	Black subjects in grades 1–2 performed at a level closer to the white mean than black subjects in grades 3–5.	Inappropriate control group; high rate of subject attrition
Evans, 1972	Central Schools	Nonequivalent control group	Unspecified	Black, fifth-grade experimental subjects' achievement in reading and math significantly better than that of control subjects.	Possible subject and school inequivalence; no adequate predesegregation measures of achievement.
Evans, 1973	Central Schools	Nonequivalent control group	Analysis of covariance	Black, experimental subjects in grades 3–5 achieved at significantly higher levels in reading and math than did control subjects.	Possible subject and school, inequivalence; no adequate predesegregation measures of achievement.

Table 1 Continued

Author	*Category*	*Design*	*Statistical Analysis*	*Results*	*Weaknesses*
Felice, 1974	Busing	Nonequivalent control group	*T* tests	Bused subjects' achievement on reading subtest and the total battery was significantly lower than that of control subjects.	Questionable school and subject equivalence.
Frary & Goolsby, 1970	Experimental project	Nonequivalent control group	Multivariate analysis of covariance	Desegregation was significantly and positively related to achievement and reading test scores of black, first-grade students.	Experimental and control subjects were not matched on important variables; highly unequal number of subjects in each treatment cell.
Goldberg, Note 11	Busing	Nonequivalent control group	*T* tests and analysis of covariance	19 of 77 comparisons showed significantly higher achievement on the part of subjects exposed to some form of school desegregation.	Failed to meet assumption of subject equivalence; high rate of subject attrition; used different pretests and posttests of achievement; no adequate predesegregation measures of achievement; different compensatory education services were available to subject groups.
Graves & Bedell, Note 5	School Closing	Separate sample, pretest-posttest	Not specified	Significantly smaller proportion of black transferred subjects failed to progress 1½ yrs. in one or more achievement areas than black control subjects.	Design is vulnerable to history effects; inadequate predesegregation measures of achievement.
Hansen, 1960	Open Enrollment	One-group, preexperimental	None	Black students' achievement improved and white students' achievement was not depressed following desegergation.	No separate reports of black and white students' test scores following desegregation; different pre- and postdesegregation measures.
Hsia, Note 14	Busing	Nonequivalent control group	*T* tests	Desegregation failed to close the achievement gap between white and black students.	Inadequate control group; black subject samples not matched on key variables.
Laird & Weeks, Note 9	Busing	Nonequivalent control group	*T* tests	Significant gains in reading achievement of younger bused subjects.	Bused subjects were volunteers, control subjects were not.
Mahan, Note 12	Busing	Nonequivalent control group	Unspecified	27 of 35 significant comparisons favored the bused subjects.	Bused subjects were volunteers, control subjects were not; sending and receiving schools not equivalent; large loss of subject data; no adequate predesegregation measure of achievement.

Table 1 Continued

Author	*Category*	*Design*	*Statistical Analysis*	*Results*	*Weaknesses*
Mayer et al., 1974	Central Schools	Nonequivalent control group	*T* tests	Black and white subjects' achievement levels increased significantly, black subjects' increase shown to be directly related to desegregation; black-white achievement gap did not widen.	Did not match black subjects samples on key variables.
Maynor, 1970	Central Schools	Unspecified, quasi-experimental	*T* tests	Subjects' postdesegregation math and total battery achievement scores were significantly higher than were predesegregation scores.	Did not match black subject samples on key variables.
Morrison & Stivers, Note 8	School Closing	Nonequivalent control group	Analysis of Covariance	Transferred fourth-grade students performed significantly better than control students in reading and math; transferred sixth-grade students performed significantly better than control students in math.	Questionable student equivalence; no adequate presdesegregation measures of achievement; results confounded by compensatory education services available to students.
Prichard, 1969a; 1969b	Central Schools	Separate-sample, pretest-posttest	Analysis of Covariance	Math achievement of fifth- and seventh-grade, transferred students was significantly higher than that of their respective control groups.	Design is vulnerable to history effects such as the change in math curriculum in the school district.
Purl & Dawson, Note 6	School Closing	Time-series	*T* tests	No significant changes in black subjects' achievement test scores over a five-year period.	Design is vulnerable to history effects; use of *t* tests was probably inappropraite.
Purl & Dawson, Note 7	School Closing	Cross-sectional and longitudinal	None	Achievement scores of third-grade students rose steadily from 1965 (predesegregation) to 1972 (postdesegregation).	No control group; inadequate design.
Rock et al., Note 10	Busing	Nonequivalent control group	Analysis of Covariance	Significant comparisons favoring the bused subjects on 13 of 27 subtests.	Subjects were a select group; sending and receiving schools were not equivalent; high rate of subject attrition.
St. John & Lewis, 1971	Open Enrollment	*Ex post facto*, quasi-experimental	Multiple regression	Racial context (percentage white) was significantly and positively related to black students' math achievement.	Not all determinants of self-selection of exposure to desegregation can be statistically controlled; additional SES controls markedly reduced the relationship between racial context and student achievement.

Table 1 Continued

Author	*Category*	*Design*	*Statistical Analysis*	*Results*	*Weaknesses*
Samuels, 1972	Busing	Posttest-only control group	Analysis of variance	Bused students performed significantly better than control students on a reading subtest and a composite reading measure.	Failure to meet the assumptions of subject and school equivalence.
Singer et al., 1975	School Closing	Separate sample, pretest-posttest	Trend analysis	Desegregation was not related to black students' achievement.	Design is vulnerable to history effects; high rate of subject attrition.
Stallings, 1959	Open Enrollment	Static-group, preexperimental	Not specified	Black and white students' achievement improved following desegregation; greatest improvement for black students.	Equivalence of student samples not determined.
Zdep, 1971	Busing	Nonequivalent control group	Analysis of variance	Achievement of bused first-grade students significantly higher than that of control students.	Failed to meet the assumption of school equivalence; questionable external validity.

Source: Laurence and Gifford Bradley: "The Academic Achievement of Black Students in Desegregated Schools: A Critical Review." Review of Educational Research (Summer)47:410-416. 1977.

Note: Permission to reproduce this table was granted by the American Education Research Association.

Table 2

Percentage of Positive and Negative Results, by Type of Data Used

Data Type	Positive	Zero	Negative	Total	(N)
Longitudinal with randomly allocated treatment/control group	86%	5%	10%	101%	(21)
Longitudinal, with justification for considering a black control group as similar to the treatment group	48%	39%	13%	100%	(23)
Longitudinal, with segregated black control group	58%	14%	28%	100%	(108)
Cross-sectional, with segregated black control group	55%	17%	28%	100%	(29)
Previous black cohort as control	53%	16%	31%	100%	(64)
Longitudinal, with a white control group	33%	8%	58%	99%	(12)
Longitudinal, compared to national norms	34%	11%	55%	100%	(44)

Source: Robert L. Crain and Rita Mahard: "Desegregation and Black Achievement: A Second Review of the Research." Center for Social Organization of Schools. Johns Hopkins University.

NOTE: Total percentages may not sum to 100 due to rounding.

References

Allen, W. R. Correlates of black student adjustment, achievement and aspirations at a predominantly white university. In Gail E. Thomas (ed.), Black students in higher education, conditions and experiences in the 1970s, pp. 126-41. Westport, Connecticut: Greenwood Press, 1981.

Allport, G. W. The nature of prejudice. Cambridge, Massachusetts: Addison-Wesley, 1954.

Armor, D. The evidence on busing. Public Interest, 1972, 28, 90-126.

Boyd, W. M. The forgotten side of the black undergraduate: An assessment of academic achievement and aspirations during the 1970s. In Gail E. Thomas (ed.), Black students in higher education, conditions and experiences in the 1970s, pp. 142-51. Westport, Connecticut: Greenwood Press, 1981.

Bradley, L. A. & Bradley, G. W. The academic achievement of black students in desegregated schools: A critical review. Review of Educational Research, 1977, 47, 399-449.

Brookover, W., et al. Elementary school social climate and school achievement. American Educational Research Journal, 1978, 15, 310-318.

Coleman, J. S., Campbell, E. Q., Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D., & York, R. L. Equality of educational opportunity. Washington, D.C.: U.S. Government Printing Office, 1966.

Coleman, J. S., Kelly, S. D., & Moore, J. A. Trends in school segregation, 1968-73. Washington, D.C.: The Urban Institute, 1975.

Crain, R. L. School integration and occupational achievement of Negroes. American Journal of Sociology, 1970, 75, 593-601.

Crain, R. L., & McPartland, J. M. Minority employment opportunities: Preliminary analysis of effects of school and college desegregation. Paper presented at the American Education Research Association, Boston, Mass.

Education Daily. U.S. civil rights report on school desegregation. Washington, D.C., 1977.

Epps, Edgar C. The impact on school desegregation on the self-evaluation and achievement orientation of minority children." Law and Contemporary Problems, 1978, 42, 57-76.

Farley, R. Racial integration in public schools, 1967 to 1972: Assessing the effects of governmental policies. Sociological Focus, 1975, 8, 3-26.

Farley, R., Richards, T., & Wurdock, C. School desegregation and white flight: An investigation of competing models and their discrepant findings. Sociology of Education, 1980, 53, 123-139.

Felice, L. G., & Richardson, R. I. Effects of desegregation on minority student dropout rates. Integrated Education, 1977, 15 (Nov.-Dec.), 47-50.

Fleming, J. Carnegie research project: Report to the board of directors. New York, 1980.

Giles, M. W., Gatlin, D. S., & Cataldo, E. F. The impact of busing on white flight. Social Science Quarterly, 1974, 55, 493-501.

Hare, B. R. School desegregation and personality variation: An analysis of three national samples by race, SES, sex and region. Paper presented at the American Educational Research Association Meeting, San Francisco, 1979.

Haynes, L., III. The Adams cases: A critical sourcebook. Washington, D.C.: Institute for Services to Education, 1978.

Johnson, D. C., Smith, V. C., & Tarnoff, S. L. Recruitment and progress of minority medical school entrants 1970-73. Journal of Medical Education, 1975, 50, 713-755.

Labov, W. The logic of non-standard English. In Frederick Williams (ed.), Language and poverty. Chicago: Markham, 1970.

McClelland, D. C. Measuring motivation in phantasy: The achievement motive. In H. Gudtzkow (ed.), Groups, leadership and men. Pittsburgh: Carnegie Press, 1951.

McConahay, J. B. The effects of school desegregation upon students' racial attitudes and behavior: A critical review of the literature and a prolegomenon to future research. Law and Contemporary Problems, 1978, 42, 77-107.

McPartland, J. M. The segregated student in desegregated schools: Final report to the Center for the Study of the Social Organization of Schools. Baltimore: Johns Hopkins University, 1968.

Morris, L. Elusive equality: The status of black Americans in higher education. Washington, D.C.: Howard University Press, 1979.

Obgu, J. U. Minority education and caste: The American system in cross-cultural perspective. New York: Academic Press.

Pettigrew, T. F. Social evolution theory: Convergences and applications. In D. Levine (ed.), Nebraska symposium on motivating, Vol. 15. Lincoln, Nebraska: University of Nebraska Press, 1967.

Pettigrew, T. G. & Riley, R. T. Race and the outcomes of schooling. In F. Mosteller and D. P. Moynihan (eds.), On equality of educational opportunity. New York: Vintage Books, 1972.

Rist, R. Desegregated schools: Appraisals of an American experiment. New York: Academic Press.

Rossell, C. H. White flight. Integrated Education, 1975, 13 (6), 3-10.

Rosenbaum, J. E. Making inequality: The hidden curriculum of high school tracking. New York: John Wiley & Sons, 1976.